



# Tecnologias de Redes de Comunicações

2006/2007

FSO - *Free Space Optics*

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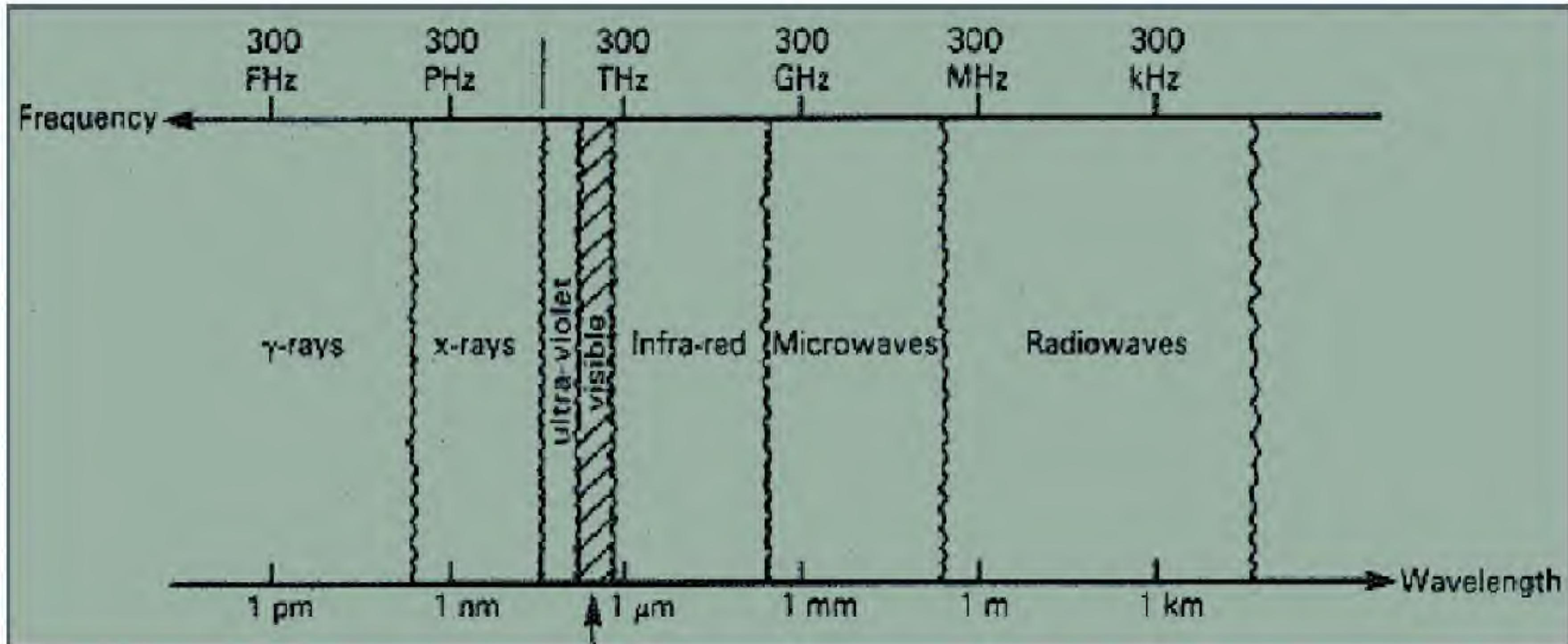
Instituto Superior Técnico

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- Introdução
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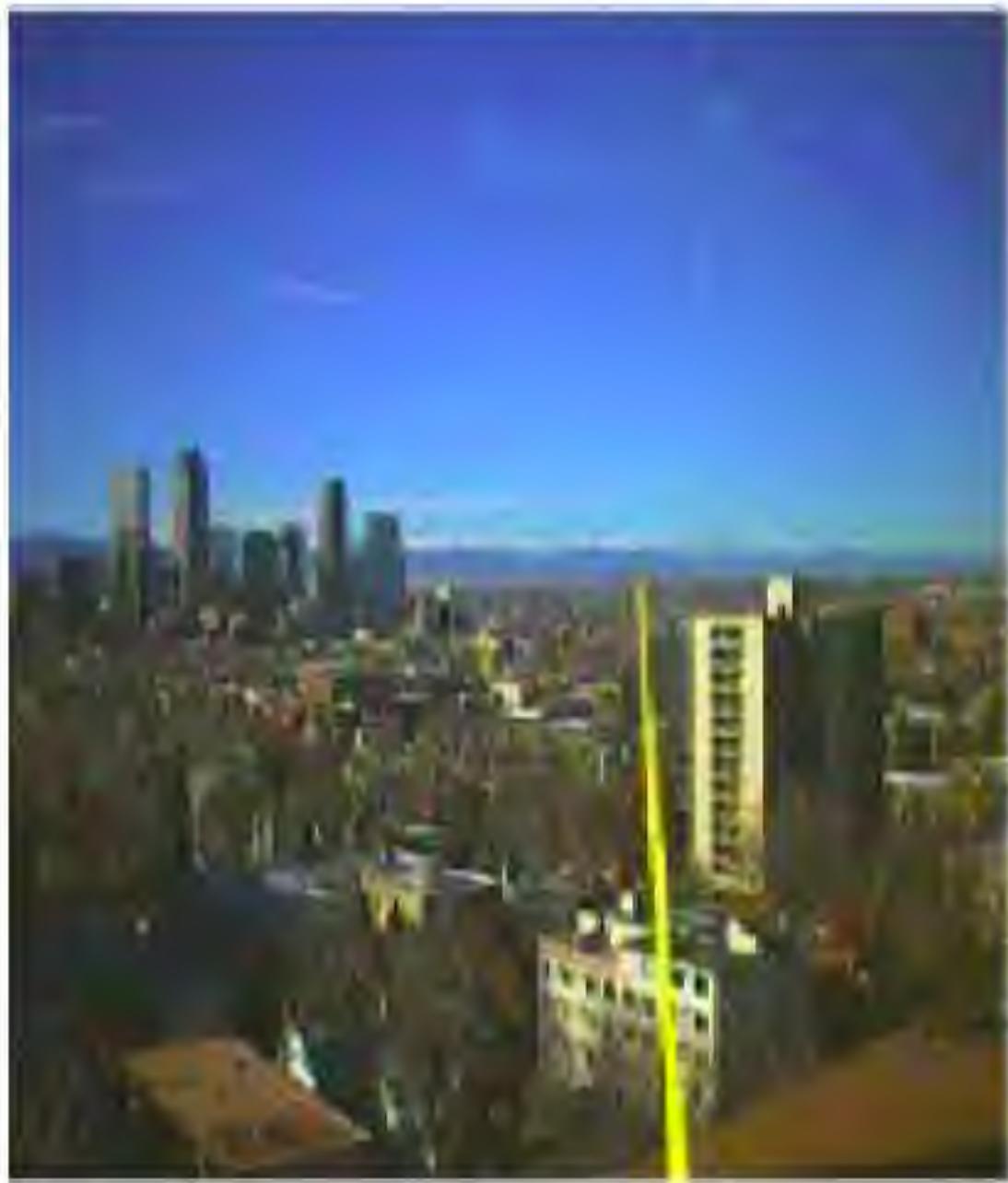
## Comprimentos de onda



- 780-850 nm (353-385 THz) - menor custo
- 1520-1600 nm (188-197 THz) - menor atenuação

## Atenuação: nevoeiro

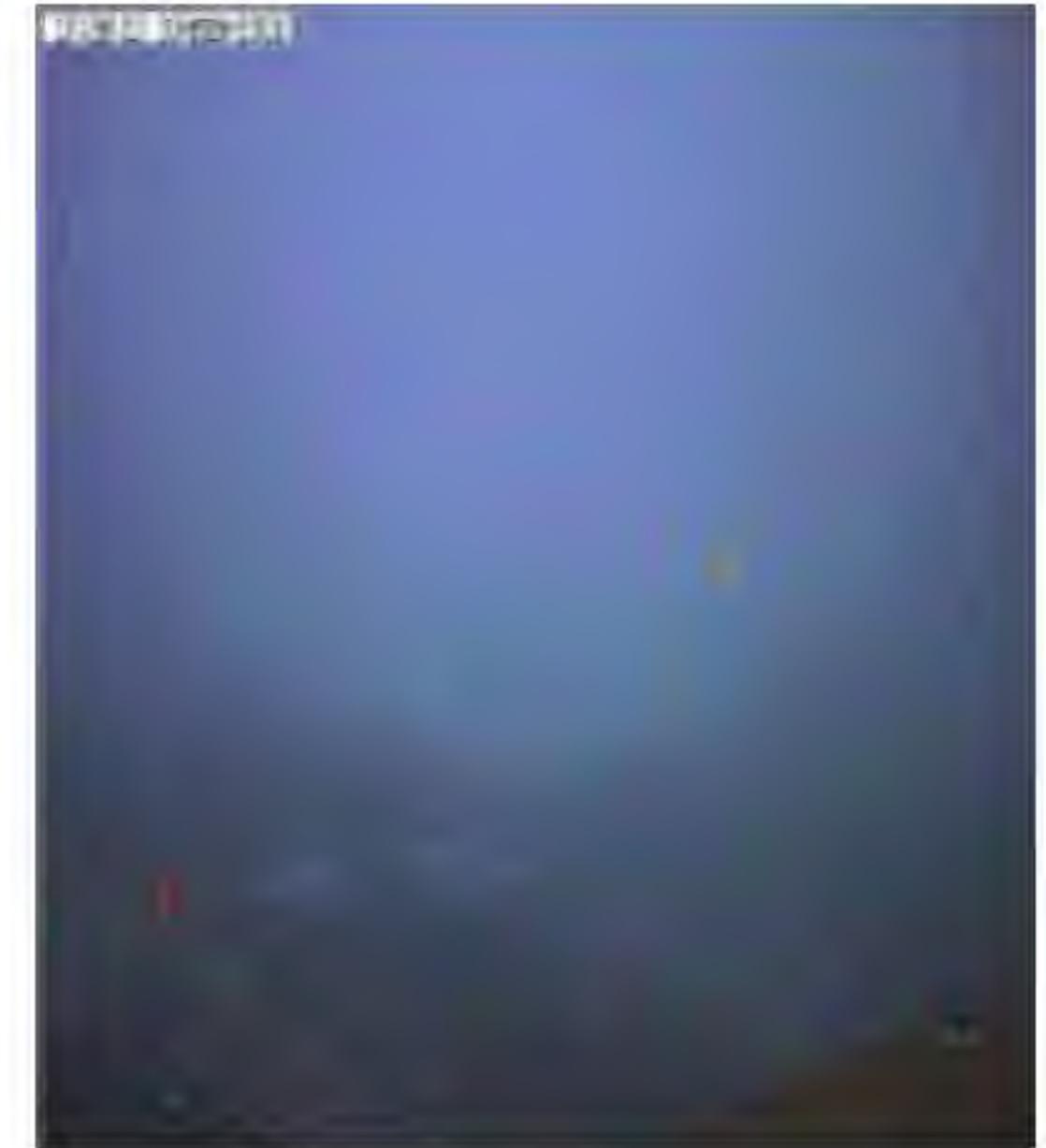
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**No Fog**  
Loss of 6.5 dB/km

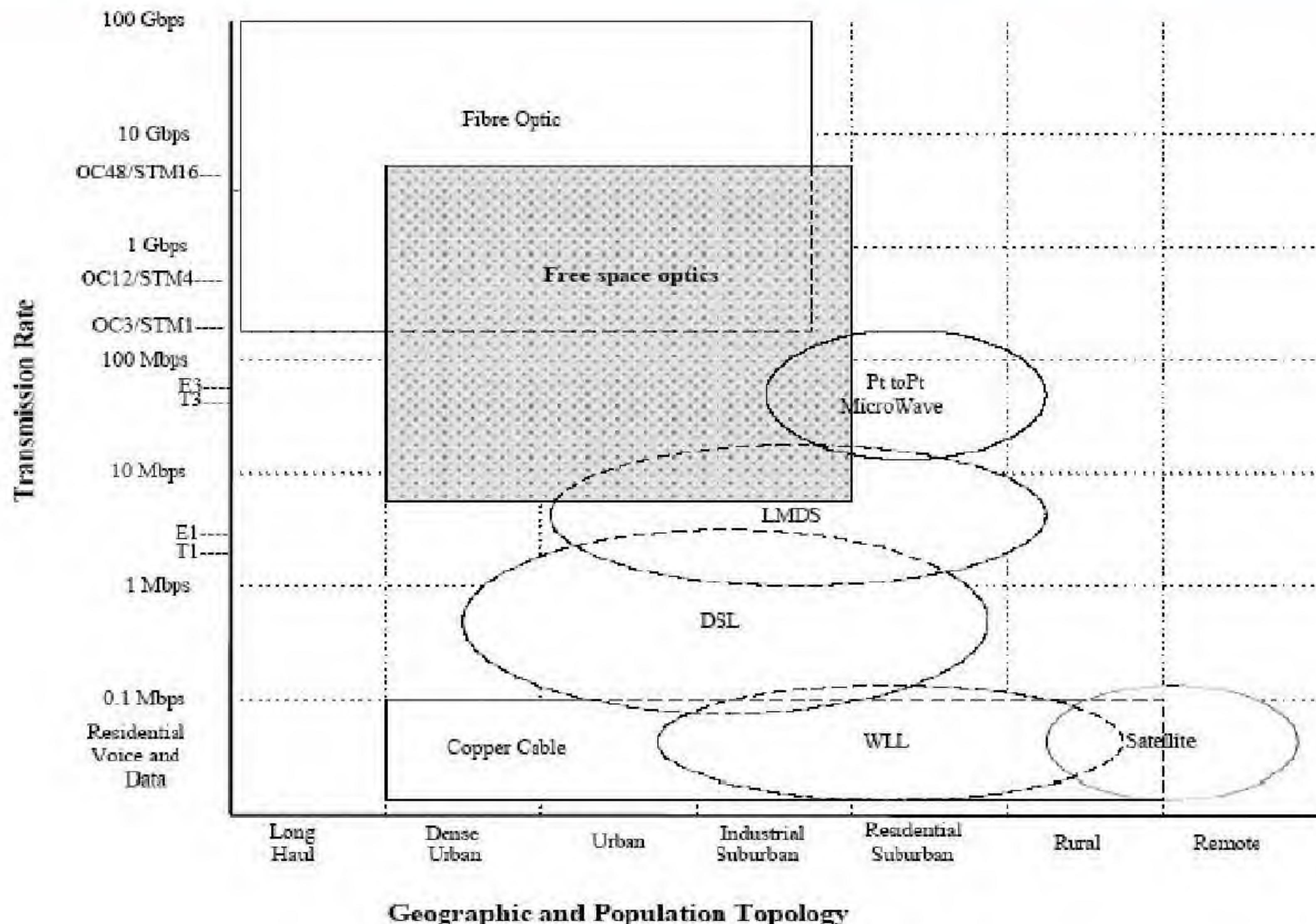


**Dense Fog**  
Loss of 113 dB/km



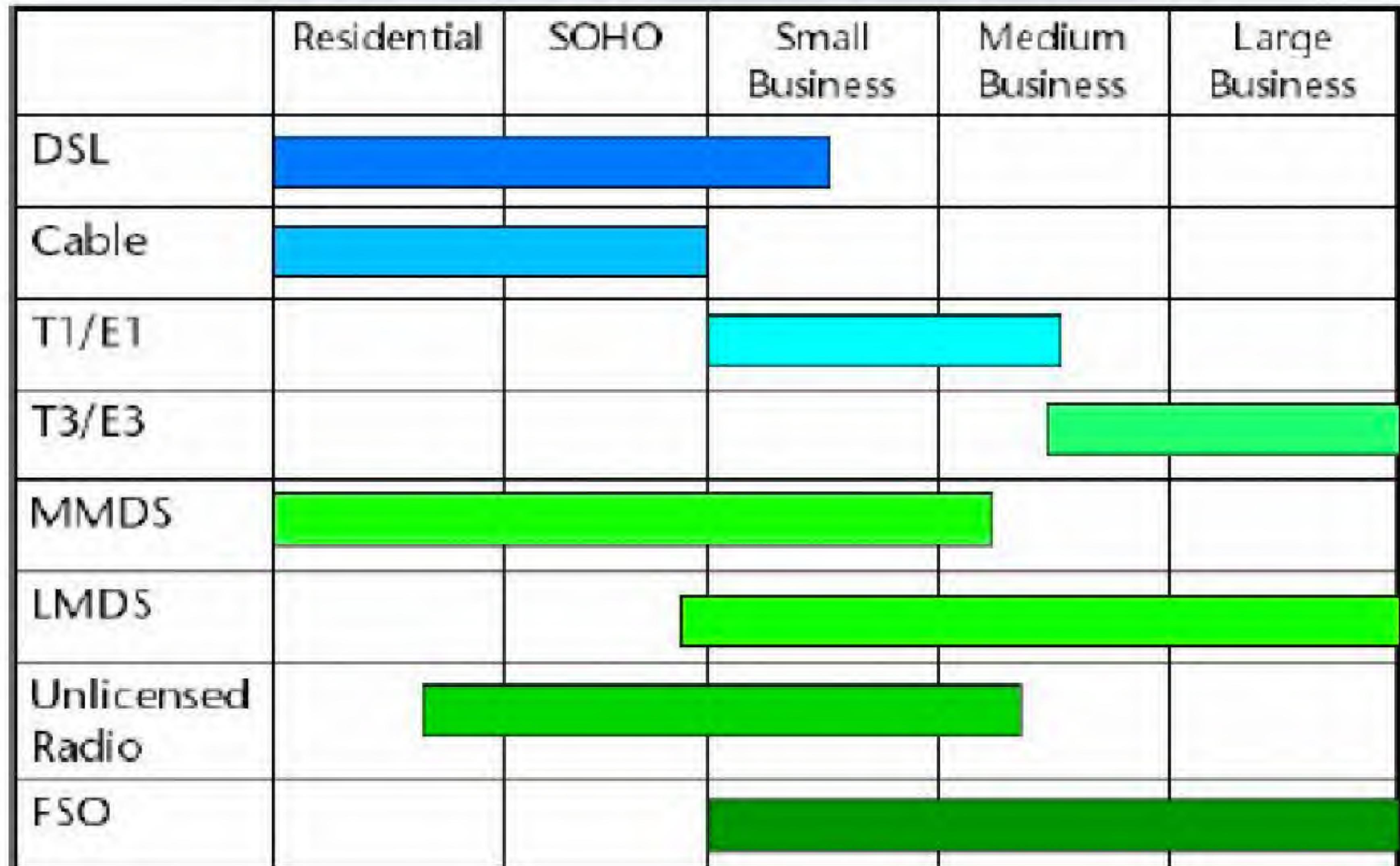
**Very Dense Fog**  
Loss of 173 dB/km

# Domínio de aplicação



## Domínio de aplicação (2)

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## Custos (Ref: 2004, parcialmente desactualizados)

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Access Medium	Speed (Mbps)	Monthly Cost (\$)	Cost/Mbps/Month
Dial-up	0.056	20	357
Satellite	0.4	50	125
Cable Modem	1.5	50	33
DSL (minimum)	0.144	49	340
DSL (maximum)	8	1200	150
T1	1.54	350	195
RF	155	1250	8
FSO	155	555	4

## Dispositivos

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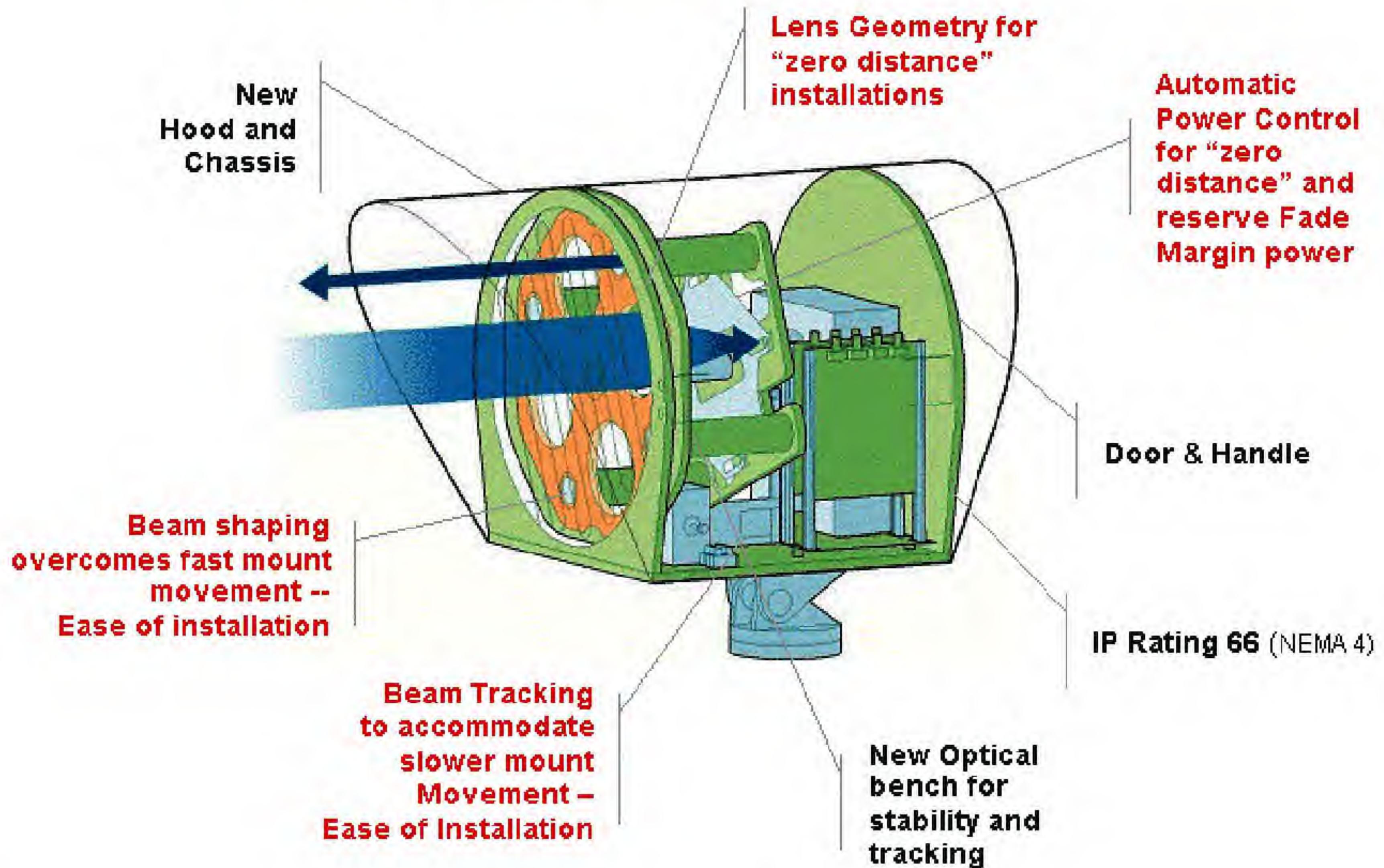


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# Product Overview: *FlightStrata*



## Links

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<http://www.freespaceoptics.org/freespaceoptics/default.cfm>

<http://www.freespaceoptic.com/>